MINISTRY OF EDUCATION, CULTURE,
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ALGORITHM AND PROGRAMMING

Subject:

Pizza Order Program

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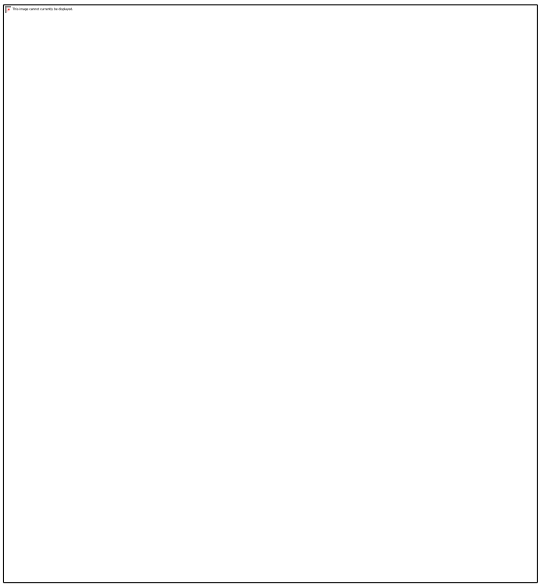

INFORMATICS MANAGEMENT STUDY PROGRAM

FACULTY OF VOCATIONAL

SURABAYA STATE UNIVERSITY

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Introduction

Abstract

The "Pizza Cashier" practicum provides a foundational understanding of creating an interactive software application that simulates the role of a cashier in a pizza restaurant. This project combines several programming concepts such as object-oriented programming (OOP), encapsulation, and user input handling to create a realistic point-of-sale system for processing pizza orders.

The main objectives of this practicum include:

- Designing an intuitive menu interface for customers to select from various types of pizzas.
- Implementing functionality for order taking, including adding pizzas to the order,including size of pizza,ask customers for extra cheese ,and completing the transaction.
- Calculating the total price of the selected pizzas, including handling payments and generating change if necessary.

This practicum serves as a practical application of theoretical programming concepts, allowing students to gain hands-on experience with Python programming, particularly the use of abstraction and class structures.

Learning Outcomes

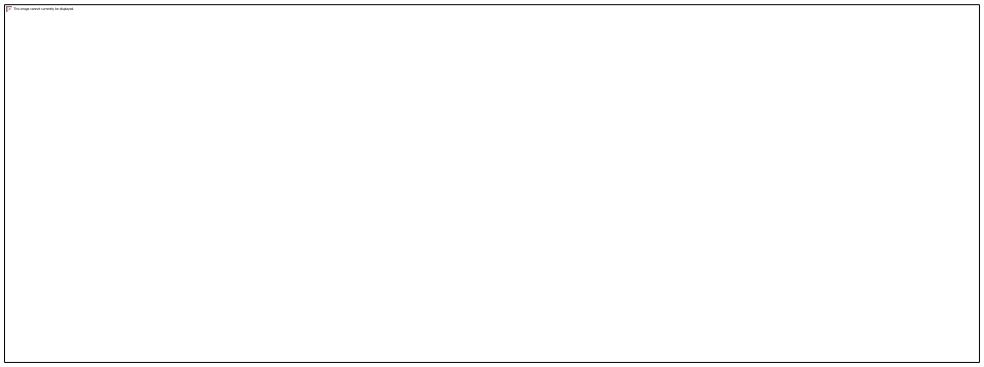
By the end of this practicum, participants will be able to:

1. Create and implement abstract classes and interfaces in Python to define the structure of a program.
2. Develop interactive command-line applications that handle user inputs and display outputs.
3. Implement logic to manage dynamic data collections (such as orders) using Python's data structures.
4. Understand and apply basic principles of object-oriented programming, including inheritance, encapsulation, and polymorphism.

The Pizza Cashier practicum is an engaging hands-on project that not only enhances programming skills but also provides insight into the workings of a basic cashier system. The skills acquired through this practicum are transferable to real-world programming tasks and can be applied to various domains within software development.

This document serves as an introduction to the practicum and may be expanded with specific coding examples, further elaboration on each step, additional requirements, or assessment criteria as needed.

Sourcecode
First step :



This code snippet serves as a foundational part of a pizza delivery application, focusing on displaying the menu. To make it a complete application, further development is needed to handle user interactions and order processing.

Output :

As you can see, the result from that code ,the menu for "MI Pizza Delivery" is a solid foundation for a pizza ordering system. It effectively presents options to customers in a clear and organized manner. To evolve this into a complete application, further development is needed to incorporate interactivity and order processing features.

Second step :

Price = 0 typically indicates that you are initializing the variable to represent a starting value. This could serve various purposes depending on the context of the application.

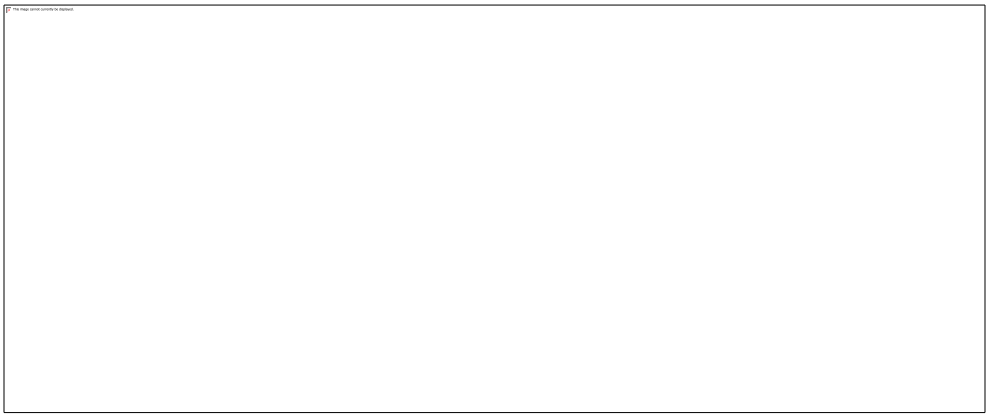
Thirs step :

- **Functionality**: The code allows users to select a pizza and updates the total price based on their choice. It provides immediate feedback by printing the selected pizza.
- **Case Insensitivity**: By using .lower(), the code ensures that the user can input their choice in any case (e.g., "Meat Lover", "MEAT LOVER", etc.), making it more user-friendly.
- **Price Updates**: The use of price += indicates that the price variable should be initialized before this code snippet. If price is not initialized, this will raise an error.
- **Missing Else Clause**: The code does not handle cases where the user inputs an invalid pizza choice. Adding an else clause could improve user experience by informing them of invalid inputs.

Output :

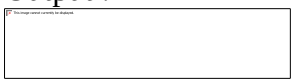
As you can see in the result from that code.If you input one of the pzza type on the display the program will print the pizza type according to your wishes

Fourth step :



1. **Input for Crust Type:**
   The user is prompted to enter a type of crust. The input is stored in the variable crust.
2. **Prompt for Pizza Size:**
   The program asks the user to choose a pizza size. The input is converted to lowercase to ensure case-insensitivity and stored in the variable size.
3. **Price Calculation:**
   The program uses conditional statements to determine the price based on the selected size:
   -**Personal Size:** If the user selects "personal", it prints a message and adds 20,000 to the price.
   -**Medium Size:** If "medium" is selected, it adds 30,000 to the price.
   -**Large Size:** If "large" is chosen, it adds 35,000 to the price.

Output :



As you can see, this output reflects a successful interaction where the user has made a selection. The program should now handle this input to complete the order process.

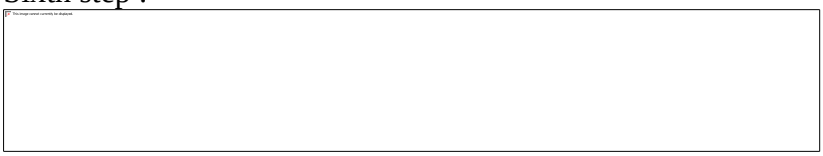
Fifth step :

This code snippet effectively manages the option for extra cheese in the pizza ordering process. With minor improvements, it can enhance user experience and ensure more robust handling of inputs.

Result :

As you can see,if the customer type “yes” in the terminal it will cost 10,000 for the extra cost ,but if the costomers type “no” the result is “Thank for the order”

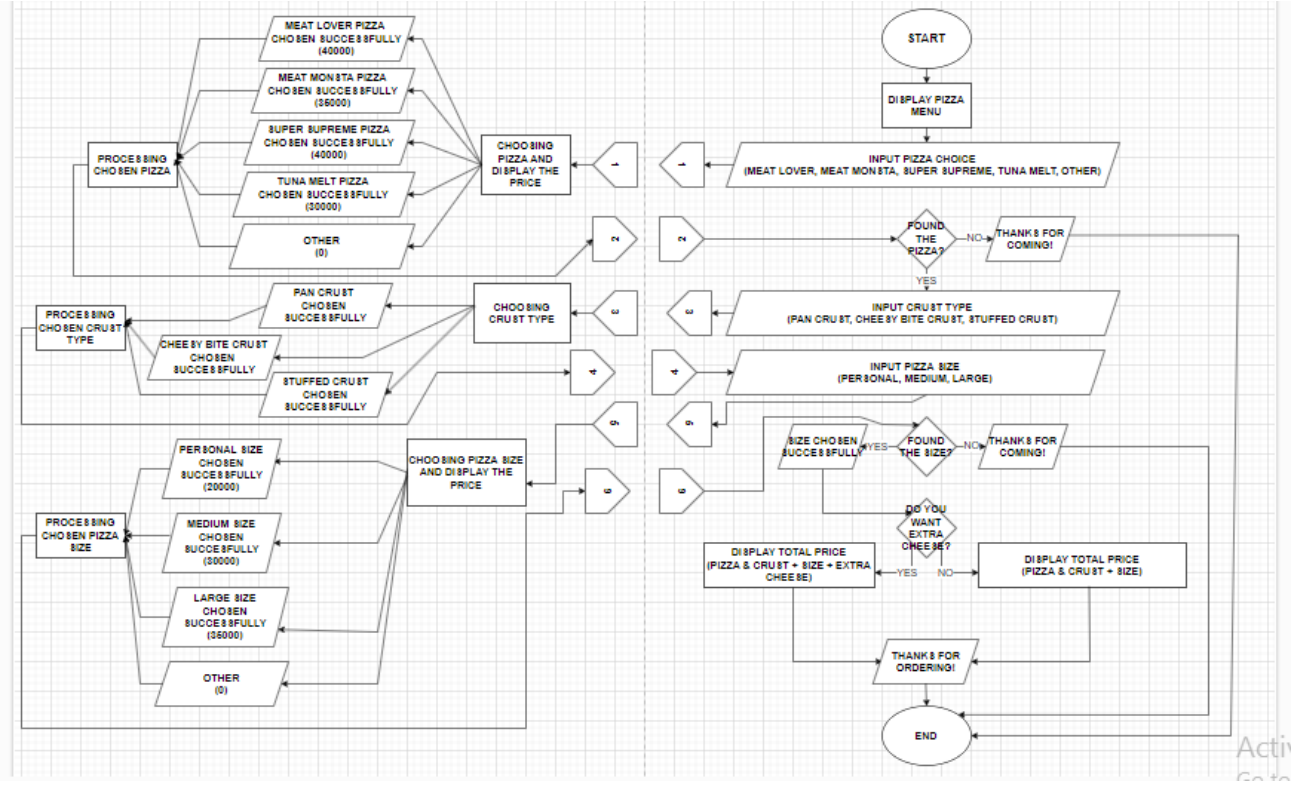
Sixth step :



This code snippet effectively concludes the pizza ordering process by thanking the user and displaying the total bil

Output :

As you can see, in that result show the total bill that the customer have to pay and there are phrases such as "Thank you for choosing MI Pizza Hut deliveries" and “Enjoy your meal”.



FLOWCHART ANALYSIS AND DESCRIPTION:

1. First we start the program with "start". It is symbolized by an oval shape and this "start" goes to the pizza menu display.

2. Secondly there is "process" which processes by displaying the menu display symbolized by a square. In this menu display, there will be 4 types of pizza menus and their respective prices: Meat Lover @ Rp40,000, Meat Monsta @ Rp35,000, Super Supreme @ Rp40,000, and Tuna Melt @ Rp30,000. Then, there are various crust variants that can be chosen without increasing the cost: 1. Pan Crust, 2. Cheesy Bite Crust, 3. Stuffed Crust. Then, there are pizza size options with their respective prices as well: 1. Personal: Rp25,000, 2. Medium: Rp30,000, 3. Large: Rp40,000. There are also additional toppings and their prices: Extra Cheese Rp13,000.

3. Then, there is "input" to input the choice of pizza to order which is symbolized by a parallelogram. There, there is a list of pizzas including: Meat Lover, Meat Monsta, Super Supreme, Tuna Melt, and Other. Other means that there are no other pizza options other than those 4 pizzas. We can input one of the pizzas to process the pizza selection we want and proceed to the next pizza ordering step.

4. Next, there is "process" to process the selected pizza options and display the price symbolized by a square.

5. After that, there is an "output" that will appear according to the pizza that has been selected which is symbolized by a parallelogram. If we select one of the 4 pizzas, Meat Lover, Meat Monsta, Super Supreme, or Tuna Melt, and also Other (meaning, pizzas other than the 4 pizzas are not available), our

choice will be processed in the next process. In this process, the selected pizza will be displayed along with its price.

6. And there is another "process" to finalize or solidify the choice that has been selected, whether it is an available pizza or Other (meaning that the desired pizza is not available, other than the 4 pizzas). This "process" is symbolized by a square.

7. Then, there is "decision" which is symbolized by a diamond. There is a question "Found the pizza?" If we input any of the 4 available pizzas, whether it's Meat Lover, Meat Monsta, Super Supreme, or Tuna Melt, it means we have successfully found the pizza (pizza is available) and we will go to the decision "yes" and we proceed to the next step of ordering pizza, whereas if we input Other (the desired pizza is not available), we will go to the decision "no", meaning we did not find the desired pizza and we will go to "output" which is symbolized by a parallelogram shape that displays "Thanks for coming!" and go directly to "end" aka the program is finished, no order or canceled order. This "end" is symbolized by an oval.

8. Continuing from the previous "yes" decision, there is "input" to input the desired crust type symbolized by a parallelogram. There is a list of crust types including: Pan Crust, Cheesy Bite Crust, and Stuffed Crust. We can input the type of crust we want.

9. Next, there is "process" to process the selected crust type which is symbolized by a square.

10. And there will be an "output" display of the selected crust type, whether it is Pan Crust, Cheesy Bite Crust, or Stuffed Crust symbolized by a parallelogram.

11. Then, there is another "process" to finalize or solidify the selected crust type denoted by a square.

12. After that, we go to "input" to input the pizza size to order which is symbolized by a parallelogram. There, there are pizza sizes including: Personal, Medium, Large and Other. Other means that there are no other pizza sizes other than these 3 pizza sizes. We can input one of the pizza sizes to process the pizza size we want and proceed to the next pizza ordering step.

13. Then, there is "process" to process the selected pizza size and display the price symbolized by a square.

14. 14. Move to the next step, there is "output" which will appear according to the selected pizza size symbolized by a parallelogram. If we have inputted one of the 3 pizza sizes in the previous step, Personal, Medium, Large, and also Other (meaning, pizza sizes other than these 3 pizza sizes are not available), our choice will be processed in the next process. In this process, the selected pizza size will be displayed along with the price.

15. And there is another "process" to finalize or solidify the choice that has been selected, whether it is the available pizza size or Other (meaning that the desired pizza size is not available, other than the 3 pizza sizes). This "process" is denoted by a square.

16. Then, there is "decision" which is symbolized by a diamond. There is a question "Found the size?" If we input any of the 3 available pizza sizes, whether it's Personal, Medium, or Large, it means we successfully found the pizza (pizza is available) and we will go to the decision "yes" and we continue to

the next step of ordering pizza, whereas if we input Other (the desired pizza is not available), we will go to the decision "no", meaning we did not find the desired pizza and we will go to the "output" which is symbolized by a parallelogram shape that displays "Thanks for coming!" and go directly to "end" aka the program is finished, no order or order canceled." and go directly to "end" aka the program is finished, no order or canceled order. "end" is denoted by an oval.

17. Continuing from the "yes" decision from the previous step, we now go to the next decision symbolized by a diamond. The decision contains "Do you want extra cheese?". If we want extra cheese, we can go to the "yes" decision. If we don't want extra cheese, we can go to the "no" decision. We have to choose one of the decisions and continue to the next process.

18. After that, there are 2 "process" flows, both of which are denoted by a square.
    Now, if from the "yes" decision from the previous step, which means we agree to add extra cheese, we will immediately get a total price display where, we will get an additional fee for adding extra cheese to our order. There will be a description of the items that we have selected from the beginning and the total price: pizza & crust + size + extra cheese.

    On the other side, if we decide "no" from the previous step, which means we do not agree to add extra cheese, we will also immediately get a display of the items that we have selected from the beginning and the total price: pizza & crust + size.

19. Once that process is complete, an "output" symbolized by a parallelogram displaying "Thanks for ordering!" will appear.

20. And finally, the program is finished marked with "end" which is denoted by an oval shape.

CONCLUSION:

The final recommendation of the pizza order program report seeks to affirm that an efficient order system which enables the selection of the type of pizza, the type of crust, the size of the pizza, the toppings, and the total cost is accommodated. Achieving these goals, the program shows effective use of control structures and work with data to help users proceed step by step through the process of making an order and to provide immediate feedback on all the changes made. This means that, the validation mechanisms incorporated assure the proper handling of inputs received from users and minimizes on any problems which in turn greatly improves the usability of the system. Furthermore, this approach allows for the easy system scalability: the program is split into modules that can be added or improved in the future if any changes are necessary, like adding to the menu or implementing a promotion, for example. In this case, the pizza order program only satisfied the intended goals of enhancing and simplifying the ordering process As a result, this makes it easier to apply or incorporate fundamental notions of programming languages in a real-world problem-solving activity.

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